US 20150015847A1

(19) **United States**

(12) **Patent Application Publication**

Bergman et al.

(10) **Pub. No.: US 2015/0015847 A1**

(43) **Pub. Date: Jan. 15, 2015**

(54) **CAPACITIVE EYE TRACKING SENSOR**

(75) Inventors: **Janne Bergman**, Tampere (FI); **Jari Saukko**, Tampere (FI); **Jussi Severi Uusitalo**, Hameenlinna (FI)

(73) Assignee: **NOKIA CORPORATION**, Espoo (FI)

(21) Appl. No.: **14/365,176**

(22) PCT Filed: **Jan. 26, 2012**

(86) PCT No.: **PCT/FI2012/050071**

§ 371 (c)(1),
(2), (4) Date: **Oct. 1, 2014**

Publication Classification

(51) **Int. Cl.**

A61B 3/113	(2006.01)
G02C 11/00	(2006.01)
G06F 3/041	(2006.01)

(52) **U.S. Cl.**

CPC ***A61B 3/113*** (2013.01); ***G06F 3/041*** (2013.01); ***G02C 11/10*** (2013.01)

USPC **351/209**; 351/246

(57) **ABSTRACT**

An apparatus (**100**), comprising a transparent capacitive sensor (**102**); a body (**101**) configured to support the transparent capacitive sensor in front of an eye (**112**) of a user (**110**); and a driver (**106**) configured to receive signals from the sensor and to determine eye movements based on the received signals, wherein the sensor (**102**) is configured to detect movement of the eye (**112**) based on electrostatic effect caused by a bulge of the cornea of the eye (**112**). The apparatus may be wearable by the user like eyeglasses.